DOCUMENT RESUME

ED 257 730 SO 016 532

AUTHOR Holyoak, Arlene; And Others
TITLE Cognitive and Affective Impact of Give and Take Series.
PUB DATE Apr 85
NOTE 40p.; Paper presented at the Annual Meeting of the American Educational Research Association, (69th, Chicago, IL, March 31-April 4, 1985). "Give and Take" is a cooperative production of the Joint Council on Economic Education, the Agency for Instructional Technology, and the Canadian Foundation for Economic Education.
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Attitude Measures; *Audiovisual Instruction; Consumer Economics; Decision Making; *Economics Education; Educational Research; High Schools; *Knowledge Level; *Student Attitudes
IDENTIFIERS Give and Take Series

ABSTRACT

Cognitive and affective impacts of the "Give and Take" series on students and sources of differences in the impacts are investigated. "Give and Take," an audiovisual series on topics and concepts in personal economics for use in grades 9-10, consists of twelve 15-minute programs designed to help students increase their understanding of economic concepts, improve their personal decision making skills, and become more knowledgeable as consumers, workers, and citizens. The sample consisted of 553 high school students in western Oregon whose teachers volunteered to participate in one of four groups, two experimental and two control groups. Both experimental groups used the series to aid instruction, but teachers in one group participated in "Give and Take" inservice education workshops. In one control group, students were taught economic concepts in the traditional manner and the other group consisted of students who had never enrolled in economics or personal finance courses. Findings show that students in the "Give and Take" workshop had significantly higher mean knowledge scores than students in the other three groups. No significant differences in attitude mean scores were found between the groups. A regression model including grade point average (GPA), gender, grade level, parental socioeconomic status, and use of mass media was used to determine differences in student understanding and attitudes. GPA and grade level explained the greatest variance in economic knowledge, while year in school explained the greatest variance in attitudes toward economics. Appendices include the questionnaires used in the study. (LH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

★ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Arlene Holyoak

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED257730

COGNITIVE AND AFFECTIVE IMPACT OF GIVE AND TAKE SERIES

Prepared for the Joint Council on Economic Education
New York, New York

Presented at American Education Research Association Conference

Principal Investigators:

Arlene Holyoak, Assistant Professor
Charlotte Harter, Associate Professor and Director,
Center for Economic Education

Graduate Assistant:

Jerri Wolfe

Family Resource Management
and
Center for Economic Education
College of Home Economics, Oregon State University

April 4, 1985

SP 016 532

ABSTRACT

Cognitive and affective impacts of the Give and Take series on students, and sources of differences in the impacts were investigated. The sample consisted of high school students in Western Oregon whose teachers volunteered to participate in one of four groups, two experimental and two control groups. Both experimental groups used the Give and take series to aide instruction, but teachers in one group particiated in a Give and Take inservice education workshop. In one control group students were taught economics concepts in the traditional manner and the other group consisted of students who had never enrolled in economics/personal finance courses.

Students in the Give and Take workshop group had significantly higher mean knowledge scores (P=.01) than the students in the other three groups, using an analysis of covariance. No significant differences in attitude mean scores were found between the groups. A regression model including GPA, gender, grade level, parental socio economic status and use of mass media was used to determine differences in students' economic understanding and attitudes. GPA and grade level explained the greatest variance in economic knowledge, while year in school explained the greatest variance in attitudes toward economics. A Pearson Product Moment Correlation was used to test the relationship between economic knowledge an attitude. A weak positive relationship was found.

PURPOSE AND OBJECTIVES

The major focus of this study was to investigate the cognitive and affective impacts of the Give & Take series on students and to investigate sources of differences in the impacts among students.

The study focused on the following objectives:

1. To determine if the Give & Take series contributes to improved student economic understanding and attitudes toward economics.
2. To determine if teacher in-service instruction in the use of Give & Take contributes to increased student economic understanding and attitudes.
3. To determine whether differences in cognitive attainment and attitudes toward economics are evidenced according to (a) GPA, (b) socio-economic status, (c) grade level, (d) gender, and (e) use of mass media.

Hypotheses

Hypotheses investigated in this study were as follows:

1. There are no significant differences in scores of experimental and control groups as measured by The Test on Give & Take.
2. There are no significant differences in economic attitude scores of experimental and control groups as measured by the Attitudes Towards Economics survey.
3. There are no significant differences in students' knowledge (attitudes) toward economics according to GPA, socio-economic status, grade level, gender, use of mass media, and attitudes (knowledge).

4. There is no relationship between knowledge of economic concepts and attitudes toward economics.

RESEARCH DESIGN AND PROCEDURES

Research Design

A nonequivalent control group design (Campbell & Stanley, 1966) was used in the study utilizing two experimental and two control groups composed of high school sophomores, juniors, and seniors.

Experimental Group 1 (Give & Take workshop group)

Seven economics/personal finance teachers participated in six hours of in-service training conducted by Charlotte Harter and Arlene Holyoak. Training included instruction on economic concepts, viewing selected Give & Take series and participation in activities included in A Guide to Give & Take. Schedule of the workshop is found in Appendix A. Teachers presented the series to their students during a three month period. Students were given pre and posttests measuring economic understanding and attitudes.

Experimental Group 2 (series group)

Six economics/personal finance teachers (who had not participated in a Give & Take workshop) utilized the Give & Take series to aide in instruction. Pre and Posttests measured the students economic understanding and attitudes.

Control Group 1 (traditional group)

Traditional instructional techniques were used to teach the concepts presented in the Give & Take series by six economics/personal finance teachers. The Give & Take series was not used as part of the instruction. Students were pre and posttested to measure economic understanding and attitudes.

Control Group 2 (no economics group)

Students who had never enrolled in economic/personal finance courses

were pre and posttested. Seven teachers participated in this group. Any students responding yes to the question "Have you ever taken a economics/personal finance course in high school?" were dropped from the group for analysis purposes.

Experimental Groups		Control Groups	
1	2	1	2
*teacher workshop			
*pretest	*pretest	*pretest	*pretest
*instruction using series	*instruction using series	*traditional instruction	
*posttest	*posttest	*posttest	*posttest

Selection of the Sample

The population for the study consisted of secondary students west of the Cascades in the State of Oregon. The geographic span of schools from north to south is 245 miles. High schools participating in the study ranged in size from approximately 100 to 2,500 students. Twenty-three teachers volunteered their students for the study. Several of the teachers signed up to participate in the project after hearing about it at a economics workshop held by the Oregon Department of Education. Teachers given a choice of groups at the Economic workshop were inclined to volunteer for the G & T inservice workshop groups first and the series group second. Researchers contact was necessary in most cases to fill control groups. Due to an unrandomized sampling, teacher bias may be present.

A total of 1009 students from fifteen schools provided 553 sets of usable data. Three hundred sixty-six responses were unusable due to student absence on either pre or posttest days and another 90 were eliminated from control group 2 because of previous economics/personal finance coursework. The usable sets of data are unevenly distributed between the four research

groups; 126 in the Give & Take workshop group, 255 for the series group, 92 for the traditional group and 80 in the no economics group. The large number in experimental groups 2 (series) is a result of two teachers in the group desiring to test all of their economic courses. A smaller than expected number resulted in the traditional group because a school schedule change caused one teacher to be unable to arrange a posttest time for his students. The fact that the State of Oregon requires one year of economics in high school and it was late in the school year, made it very difficult to find students of the same grade level who had not had an economics or personal finance class to participate in control group 2 (no economics). Testing of students in control group 2 occurred in English, math, history, and science courses.

Data Collection

Pretesting took place in late February and early March. The majority of pretests were administered by a member of the research team. Special circumstances (time, distance) prevented researchers from traveling to a few locations. In these cases, testing materials were mailed to an administrator in the school with the arrangement that that person would proctor the testing. To avoid contamintion of the sample, teachers were not given access to the testing instruments. Posttesting was scheduled for the middle to the end of May.

Instrumentation for the Study

The data were collected from students using three instruments (Appendix BCD).

Personal Data Form

Questions regarding personal data were developed by the researchers and were used to collect information concerning gender, year in school, GPA, use of mass media and family socioeconomic status. The personal data were collected during the pretesting with the questions following the attitude

instrument (ATE). This information was used to determine whether differences in economic knowledge and attitudes were systematically related to the selected variables.

Test on Give & Take (G & T)

Students' economic knowledge was measured during the pre and posttesting using the Test on Give & Take developed by the Joint Council on Economic Education.

Survey on Economic Attitudes: Attitudes Toward Economics (ATE)

The economic attitudes of students were measured by the pre and posttests using the Survey on Economic Attitudes: Attitudes Toward Economics (ATE). The 14-item test developed by Walstad and Soper (1981) was designed for use with cognitive instruments in the high school setting. Inadvertently, two items were left off the test leaving a 12-item test. A five-point scale ranging from strongly agree to strongly disagree was used to rate each item. Eight of the statements were positively stated; that is, they reflected a desirable attitude. Four statements were negatively worded, thus reflecting an undesirable attitude. The positively worded statements were scored as follows: 1= strongly agree, 2= agree, 3= undecided, 4= disagree, and 5= strongly disagree. The negatively worded statements were scored in reverse direction. Thus, a lower score on the attitude scale indicates a more positive attitude towards economics. A score ranging from 12 to 60 was possible.

Data Analysis

Statistical Interactive Programming System (SIPS) was used by David Niess of the Oregon State University Computer Center to analyze the data. An analysis of covariance was used to test the differences between the mean scores on both the G & T and the ATE. A few students were missing a response to a question; in those cases an individual item mean was used. Multiple

linear regression was used to determine the significance of the selected variables. The following equation was used:

$$Y_1 = B_0 + B_1X_{1i} + B_{2i} + \ldots . B_nX_{mi} + e_i$$

Where:
X_1 = GPA
X_2 = Sex
X_3 = Grade level
X_4 = Fathers occupation
X_5 = Mothers occupation
X_6 = Fathers educational attainment
X_7 = Mothers educational attainment
X_8 = TV
X_9 = News

Occupational categories of parents were weighted using Duncan's Socio-economic Index (Appendix E). The relationship between the G & T and the ATE was determined using Pearson's Product-Moment Correlation.

ANALYSIS OF DATA

Description of the Sample

The population for the study consisted of high school students in the State of Oregon. Of the students who completed both the pre and the posttest 300 (54.2 percent) were boys and 253 (45.8 percent) were girls. Overall, 54.1 percent of the students were seniors, 26 percent juniors, and 19.7 percent sophomores, reflecting the tendency of Oregon high schools to present economic concepts at the higher grade levels. (Table 1)

Use of mass media was determined by frequency of television viewing and newspaper reading during a one week span. Of the students surveyed 21.5 percent rarely watch T.V. (never or once a week), 45.4 percent watch T.V. two or three times a week, and 32.5 percent spend four or more different times a week watching T.V. Students read the newspaper more often than they watched T.V. Forty-one percent read the newspaper four or more times a week. One-third of the students read a newspaper two or three times a week and 22.8 percent rarely read a paper.

Previous research has suggested that parental socioeconomic status

Table 1. Description of Respondents

Variable	Number	Percent
Sex		
Male	300	54.2
Female	253	45.8
Total	553	100.0
Year in School		
Sophomore	109	19.7
Junior	144	26.0
Senior	299	54.1
Missing	1	.2
Total	553	100.0
Frequency of Reading Newspaper		
Never	42	7.6
Once a week	84	15.2
Twice a week	89	16.1
Three times a week	96	17.4
Four or more times a week	228	41.2
Missing	14	2.5
Total	553	100.0
Frequency of T.V. Viewing		
Never	35	6.3
Once a week	84	15.2
Twice a week	101	18.3
Three times a week	150	27.1
Four times a week	180	32.5
Missing	3	.5
Total	553	100.0
Educational Attainment of Father		
No Formal Education	0	.0
Some Grade School	4	.7
Completed Grade School	11	2.0
Some High School	63	11.4
Completed High School	142	25.7
Some College	90	16.3
Completed College	97	17.5
Completed Master's Degree, Doctorate, Medical or Law Degree	65	11.8
Don't know & Missing	81	14.6
Total	553	100.0

Table 1. Description of Respondents (cont'd)

Variable	Number	Percent
Educational Attainment of Mother		
No Formal Education	0	.0
Some Grade School	1	.2
Completed Grade School	5	.9
Some High School	53	9.6
Completed High School	187	33.8
Some College	110	19.9
Completed College	103	18.6
Completed Master's Degree, Doctrate, Medical or Law Degree	27	4.9
Don't know or Missing	67	12.1
Total	553	100.0
Occupational Category of Father		
Professional, Business or Managerial	237	42.9
Clerical, Office or Salesman	26	4.7
Military	9	1.6
Manual	218	39.4
Other	18	3.3
Don't know or Missing	45	8.1
Total	553	100.0
Occupational Category of Mother		
Professional, Business or Managerial	142	25.7
Clerical, Office or Saleswoman	171	30.9
Military	0	.0
Manual	69	12.5
Homemaker	75	13.6
Other	19	3.4
Don't know or Missing	77	13.9
Total	553	100.0

relates to economic understanding (Jackstadt, 1981). Educational attainment and occupational category of both parents were asked of respondents. In response to both questions approximately 10 percent of the students either did not know that information or chose not to answer. Fourteen percent of the fathers and 10.7 percent of the mothers had less than a high school education. One-fourth, (25.7 percent) of the fathers' education ended with high school graduation while 16.3 percent went on to complete some college and 17.5 percent graduated with a bachelors degree. Another 11.8 percent of the fathers completed a graduate program. High school completion was the most frequent single level of education for mothers, with 33.8 percent in this category. Another 43.4 percent of the mothers had some college experience, with 18.6 percent completing an undergraduate degree and 7.9 percent with a graduate degree. The occupational categories for fathers most frequently checked were professional, business, or managerial (N= 237) and manual (N= 218). Mother's occupations tended to fall into the clerical, office or salesperson (N= 171) and professional, business or managerial (N= 142). Seventy-five of the students checked the "other" box and listed homemaker as their mother's occupation.

Testing of Hypotheses

Hypothesis 1

There are no significant differences in scores of experimental and control groups as measured by The Test on Give & Take .

The Test on Give & Take was used to determine students' knowledge of economic concepts. Out of a possible 36 points, scores ranged from 5-35 on the pretest and 4-36 on the posttest. A summary of results is presented in Table 2. This table summarizes the mean scores for each of the four groups. In all groups with the exception of the Give & Take workshop group, the mean score for the posttest was lower than the pretest.

Table 2. Pre and Post Test Means from "Test on Give and Take" According to Group

	Give and Take Workshop (N= 126)	Series (N= 255)	Traditional (N= 92)	No Economics (N= 80)
Pre Test	23.1	25.6	24.4	24.9
Post Test	27.8	24.8	21.9	23.9

Table 3. T-Test Matrix for Adjusted Group Means for the "Test on Give and Take"

	Give and Take Workshops	Series	Traditional	No Economics
Give and Take Workshop	0.0000			
Series	-7.3273**	0.0000		
Traditional	-8.2303**	-2.6383**	0.0000	
No Economics	-5.9777**	-.3797	1.7859	0.0000

* Significant at the .05 level

** Significant at the .01 level

Note: T-tests were used to determine differences among groups, with posttest means adjusted for pretest scores.

The covariance analysis, as reported in Table 3, indicates that the Give & Take workshop group was significantly different (p .01) than the other three groups.

Hypothesis 1 was rejected.

Hypothesis 2

There are no significant differences in economic attitude scores of experimental and control groups as measured by the Attitude Towards Economics test.

The mean scores of attitudes towards economics are summarized in Table 4. Scores could range from 12 to 60 with a lower score indicating a more positive attitude. The covariance analysis, as reported in Table 5, indicates there were no significant differences in mean scores obtained from the four groups.

Hypothesis 2 was retained.

Hypothesis 3

There are no significant differences in students' knowledge (attitudes) toward economics according to GPA, socioeconomic status, grade level, gender, and use of mass media, and attitudes (knowledge).

The variables included in the regression model explained 28 percent of the variance on the G & T pretest and 40 percent on the posttest. The findings in Table 6 indicates that GPA and grade level are the most consistent variables significantly impacting both pre and posttest scores on the Test on Give & Take . In the total sample, GPA was positively correlated (p=.01 pretest, p=.05 posttest) with mean scores. In all four groups, GPA was significantly correlated (p=.01) with the G & T pretest scores; however, on the posttest the only significant relationship (p=.05) was found in the series group. Similar to GPA, year in school was

Table 4. Pre and Post Test Means from the "ATE" According to Group

	Give and Take Workshop (N= 126)	Series (N= 255)	Traditional (N= 92)	No Economics (N= 80)
Pre Test	35.6	34.2	35.9	35.6
Post Test	34.8	34.4	35.8	36.3

Note: Lower score indicates a more positive attitude.

Table 5. T-Test Matrix for Adjusted Group Means for "ATE"

	Give and Take Workshop	Series	Traditional	No Economics
Give and Take Workshop	0.0000			
Series	.7858	0.0000		
Traditional	.8879	.2943	0.0000	
No Economics	1.7315	1.2583	.8225	0.0000

* Denotes significance at the .05 level

** Denotes significance at the .01 level

Note: T-tests were used to determine differences among groups, with posttest means adjusted for pretest scores.

significant (p=.01) for both the pre and posttests for the entire sample, but does not hold true for the analysis within the groups. On the pretest, seniors scored the highest followed by sophomores and juniors; however, on the posttest juniors scored the highest followed by sophomores and seniors (Table 7).

Other variables explaining variance in the regression model include: mass media (frequency of television viewing and reading the newspaper) and mothers' socio-economic status. Significant differences in these variables show up sporadically in the regression analysis for the total group as well as within the groups. Television viewing was significantly (p=.05) related to the G & T posttest for the entire sample; students with moderate viewing habits (two times a week) had the highest scores. Frequency of reading of newspapers was significant (p=.01) only on the pretest for the traditional group. As indicated in Table 7, students (entire sample) who reported their mothers were homemakers scored higher on the G & T pretest than students whose mothers' occupation classification is professional, clerical or manual. Mothers' educational attainment was significant (p=.05) on the pretest in the traditional group.

The hypothesis that there are no significant differences in students' knowledge of economics according to grade level, GPA, mass media, and mothers' socioeconomic status was rejected. The hypothesis that there are no significant differences in students' knowledge of economics according to gender and fathers socioeconomics status was retained.

The variables included in the regression model explained 13 percent of the variance on the ATE pretest and 14 percent on the posttest. As indicated in Table 8, year in school explains the most variance in ATE pre and posttest scores. As a total group, seniors had the most positive pretest attitude followed by juniors and sophomores. On the posttest, juniors had the most

Table 6. The Effect of Selected Variables on Give and Take Pre and Posttest Scores

Variables		Total Sample		G & T Workshop		Series		Traditional		No Economics	
		Pre-G&T	Post-G&T	Pre-G&T	Post-G&T	Pre-G&T	Post-G&T	Pre-G&T	Post-G&T	Pre-G&T	Post-G&T
GPA	t=	7.19**	1.96*	2.85**	1.55	3.59**	2.27*	2.7**	-.47	6.0**	.27
Sex	t=	1.45	-1.01	.09	.51	1.69	-.98	.58	.17	1.96	-.24
Year in School	F=	8.3**	8.4**	2.4	2.22	1.6	1.79	4.5*	.54	.004	5.15*
TV	F=	.065	2.48*	.90	.32	.31	.98	1.93	.87	3.3*	.68
News	F=	1.56	1.94	.42	.54	1.9	1.6	3.98**	.70	1.9	1.31
Fathers Occupation	F=	.97	.94	1.4	.70	1.21	.70	.27	.20	2.47	2.5
Mothers Occupation	F=	2.55*	.48	.69	1.0	4.15**	.31	1.0	.53	2.58	.86
Fathers' Educational Attainment	F=	1.73	.58	.89	.19	1.9	.81	1.89	.75	.65	.15
Mothers' Educational Attainment	F=	1.49	.59	----	----	1.15	.66	.76	.30	2.7*	1.08

17

*Denotes significance at .05 level
**Denotes significance at .01 level
Note: T and F test statistic is from a multiple linear regression.

Table 7. Effect of Significant Variables on "the Test on Give and Take" Pre and Posttest. (Regression Coefficients)

Variables	Total Sample		G & T Workshop		Series		Traditional		No Economics	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Year in School										
Sophomore	-.70	.636					-5.996			
Junior	-.79	1.128					.635			-2.38
Senior	1.49	-2.764					5.361			2.38
TV										
Never		-3.199							-3.64	
Once a week		.462							-2.98	
Twice a week		1.59							4.55	
Three times a week		.28							.058	
Four or more		.867							1.128	
News										
Never							-26.91			
Once a week							6.49			
Twice a week							7.40			
Three times a week							5.77			
Four or more							7.25			
Mothers' Occupation										
Professional, Business, Managerial	.224				.188					
Clerical, Office, Salesperson	.207				.895					
Manual	-1.727				-1.36					
Homemaker	2.371				3.79					
Mothers' Educational Attainment										
Some high school									-1.99	
Completed high school									-1.11	
Some college									-2.48	
Completed college									-.11	
Completed graduate degree									6.70	

Table 8. The Effect of Selected Variables on ATE Pre and Posttest Scores

Variables		Total Sample		G & T Workshop		Series		Traditional		No Economics	
		Pre-ATE	Post-ATE	Pre-ATE	Post-ATE	Pre-ATE	Post-ATE	Pre-ATE	Post-ATE	Pre-ATE	Post-ATE
GPA	t=	-2.05*	-.198	-1.27	.25	-1.34	-1.36	.19	.43	-1.25	-.03
Sex	t=	.10	-.378	-.06	1.27	-.78	-2.5*	-.38	.04	1.03	.535
Year in School	F=	4.04*	3.55*	9.37**	4.99**	1.57	2.10	2.73	.55	[illegible]04	8.14**
TV	F=	1.99	1.56	.99	1.44	1.72	.94	.21	.28	.75	.88
News	F=	2.24	.35	1.1	2.39	.56	1.64	.86	1.05	2.40	.57
Fathers Occupation	F=	.44	1.15	2.13	1.24	.88	.74	2.01	.47	.29	1.56
Mothers Occupation	F=	1.36	1.44	.13	.12	1.17	1.14	.42	.70	.39	.91
Fathers' Educational Attainment	F=	1.18	.61	.94	1.08	1.48	1.05	1.54	.80	.71	2.1
Mothers' Educational Attainment	F=	.25	1.63	----	----	.32	1.13	1.44	1.3	.74	.79

*Denotes significance at .05 level
**Denotes significance at .01 level
Note: T and F test statistic is from a multiple linear regression.

Table 9. Effect of Significant Variables on the "ATE" Pre and Posttest. (Regression Coefficients)

Variables	Total Sample		G & T Workshop		Series		Traditional		No Economics	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Sex										
Males						-1.15				
Females						1.15				
Year in School										
Sophomore	1.44	-.053	2.68	-1.08						
Junior	-.47	-.924	-4.29	-2.84						2.00
Senior	-.97	.977	1.61	3.92						-2.00

*Note: Lower score indicates a more positive attitude.

positive attitude followed by sophomores and seniors. (Table 9) A significant difference (p=.05) in attitude as impacted by gender was only noted in the series group with boys having a more positive attitude than girls on the posttest.

The hypothesis that there is no significant difference between students' attitudes towards economics according to grade level and gender was rejected. The hypothesis that there is no significant differences in students' attitudes towards economics according to GPA, mass media, and socio-economoc status was retained.

Hypothesis 4

There is no relationship between knowledge of economic concepts and attitudes toward economics.

The Pearson Product Moment Correlation between Pre-G & T and Post-ATE was -.2209 (p=.05), and between Post-G & T and Post-ATE was -.2310 (p=.05) (Table 6). Thus, hypothesis 4 was rejected. However, the coefficients represent a weak test of this relationship.

DISCUSSION

Based on the findings from this study, it was concluded that students who view the Give & Take series and are taught by teachers who have received Give & Take in-service training are significantly more knowledgable about economic concepts than students who have been taught by teachers (1) without Give & Take training, (2) in the traditional manner, or (3) students who have had no economic courses. This indicates the importance of teacher training and the effectiveness of the Give & Take Workshop Leader's Handbook.

Due to limited finances, the in-service training for this project consisted of only six hours which is considered to be very minimal. Although limited in time span, teacher response was very positive (see Appendix F for

Table 10. Correlation Coefficients of the Pre and Post Scores on the "Test on Give and Take" and the "ATE"

	1	2	3	4
1. Give and Take Pre Test				
2. Give and Take Post Test	.5400			
3. ATE Pre Test	-.2209	-.2333		
4. ATE Post Test	-.1052	-.2310	.6495	

evaluation summary). All seven of the teachers said the workshop was helpful to them in using Give & Take in their classroom. An impressive finding was the effect the workshop had in promoting a positive change in the teachers' attitude toward teaching economics. Before the workshop four teachers reported feeling neutral or somewhat negative about teaching economics while two teachers were somewhat positive and only one teacher reported being very positive. As a result of the workshop, six teachers reported more positive, with three of these being much more positive about this teaching assignment. Only one teacher reported no change at all, but this was the teacher who felt very positive about teaching economics prior to the workshop.

It was puzzling to note that with the exception of the Give & Take workshop group, all the posttest mean scores were lower than the pretest scores. In administering the posttests, the researchers found many of the classes, especially those composed of seniors, to be intensively involved in end of the school year activities with a very carefree attitude toward school work being displayed. The researchers concluded that the first semester of the school year would be a more desireable time than the second semester to conduct such a research project. As noted, the experimental group in which the teachers received in-service training and utilized the Give & Take series in teaching economics/personal finance, was the only group to show an increase in economic knowledge. The mean scores increased from 66 percent on the pretest to 80 percent on the posttest.

Although the other three groups had a decrease in posttest mean scores, it is interesting to note that the Experimental Group 2 which utilized the Give & Take series without prior teacher in-service instruction, had less of a decrease than control group 1, where economic concepts were taught in the traditional manner. The series group had a pretest mean score of 25.6 or 71

percent and a posttest mean score of 24.8 or 69 percent. The traditional group decreased from 68 percent to 61 percent.

The level of economic knowledge has been studied in relation to factors such as GPA, grade level, gender, socio-economic status and use of mass media. This study found significant differences in GPA and grade level relative to students economic knowledge. These findings support the findings of Highsmith (1974), Jackstadt & Grootout (1980), and Walstad (1982) that students with higher GPAs are likely to score higher on tests of economic knowledge. Higher test scores in higher grades as reported in prior research (Joint Council on Economic Education 1971, 1973; Soper, 1979) was not a consistent finding in this study. Although year was significant, no distinct pattern is apparent. The researchers think that the drop in senior posttest scores is partially due to "senioritis."

Research findings concerning male and female differences in economic understanding are not conclusive. MacDowell, Leman and Soper (1977) list thirteen studies which found gender to be an important variable in determining cognitive outcomes, with males scoring higher on tests measuring economic knowledge than females. Contrary to those findings, ten other studies cited in the same article reported insignificant gender related differences. This study supports the later finding that gender is not significantly related to knowledge of economics.

Economic education researchers have been criticized by Weisbrod (1979) for not paying attention to the impact of television and popular journalism on economic knowledge of students. Jackstadt (1981) found that mass media attention influenced boys' economic knowledge but was not found to be a significant factor for girls. The present study found some indication of mass media influence on economic knowledge. The questions used to measure mass media influence were weak in the fact that they were too general and did

not consider what types of TV programs (sports, news, etc.) were viewed or what newspaper content was read. This is a variable worthy of further research.

Researchers have indicated a positive relationship between socio-economic status and academic achievement (Jenks, 1972; Sewell & Shah, 1968; Boocock, 1966). This study found some significant relationship between economic knowledge and mothers' socio-economic status but no relationship with fathers' socio-economic status. It should be noted that concerns were expressed regarding the socio-economic questions asked as part of this study. One school district would not allow their students to answer the four socio-economic questions, resulting in incomplete data for the analysis. In addition, some students voiced concern to the researchers about these same questions.

This study found significant differences on the mean scores of the attitude survey and the variables of grade level and gender. Pretest scores for the total group showed more positive attitudes as they passed through the grades. This same observation did not hold true for the posttest where seniors' attitude scores were less positive than the other two grades. This may be due to the closeness of the commencement activities as already noted. Gender differences only appeared in one group with boys having a more positive attitude on the posttest than girls.

SUMMARY

The major finding from this study is that the combination of teacher in-service training and viewing of the series by the students may lead to greater economic understanding than when economic concepts are taught using the Give & Take series without teacher in-service training or taught in the traditional manner.

Budget

A. Teacher In-service	
Mileage	$ 0.00
Lunch	36.00
Information Packets	16.39
Teacher Substitutes	256.62
B. Give and Take Program	
Video Tapes	128.52
Teacher Guides	0.00
Tests	48.00
C. Services and Office Supplies	
Postage	36.21
Miscellaneous (telephone, office supplies, typing, mileage)	562.16
D. Data Analysis	683.42
E. Personnel	
Summer Graduate Assistant	500.00
TOTAL	$2267.32

Family Resource Management Department Support
Secretarial 40 hours
Graduate Assistant (50% of a .15 appointment during fall and winter terms)

References

Boocock, D.S. Toward A Sociology of Learning: A Selective Review of Existing Research. Sociology of Education, 1966, 39(1), 1-45.

Campbell, D.T. & Stanley, J.C. Experimental and Quasi-Experimental Designs For Research. Chicago: Rand McNally & Co., 1966.

Highsmith, P. A Study to Measure the Impact of In-Service Institutes on the Students of Teachers Who Have Participated. The Journal of Economic Education, 1974, 5(2), 77-81.

Jackstadt, S.L. A Study of the Relationships Between Economic Knowledge and Attitudes of High School Students. Unpublished Doctoral Dissertation, Indiana University, 1981.

Jackstadt, S.L. & Grootaert, C. Gender, Gender Stereotyping and Socioeconomic Background as Determinants of Economic Knowledge and Learning. Journal of Economic Education, 1980, 12(1), 34-40.

Jenks, C. Inequality: A Reassessment of the Effect of Family and Schooling in America. New York: Harper and Row, 1972.

Joint Council of Economic Education. Junior High School Test of Economic Understanding: Interpretive Manual. New York, 1973.

Joint Council of Economic Education. Test of Understanding in Personal Economics: Interpretive Manual and Discussion Guide. New York, 1971.

MacDowell, V.A., Senn, P.R. & Soper, J.C. Does Sex Really Matter? Journal of Economics Education, 1977, 9(1), 28-33.

Rowe, K. & Brenne, R. Statistical Interactive Programming System (SIPS) Command Reference Manual. Oregon State University.

Sewell, W.H. & Shah, V.B. Parent's Education and Children's Education Aspirations and Achievements. American Sociological Review, 1966, 33(2), 191-209.

Soper, J.C. Test Manual and Rationale For the Test of Economic Literacy. New York: Joint Council on Economic Education, 1979.

Walstad, W.B. & Soper, J.C. Measuring Economic Attitudes in High School. A paper presented at the National Council for Social Studies in Detroit MI, 1981. (Eric Document Reproduction Service No. ED 210 218)

Walstad, W.B. & Soper, J.C. A Model of Economic Learning in High Schools. The Journal of Economics Education, 1982, 12(2), 40-53.

Weisbrod, B.A. Research in Economic Education: Is It Asking the Right Question? American Economic Review, 1979, 69(2), 15-21.

Appendix A

Give & Take Teacher Inservice Workshop
February 29, 1984

AGENDA

8:45	Raggedy Beginnings	
9:15	Introductions	Charlotte
9:30	Introduce Give & Take Series and Research Project	Arlene
9:45	Let's Save: Opportunity Cost Program #3 Introduction View program Follow-up activities Discuss economic concepts Review material in Teachers Guide	Arlene
10:15	Break	
10:30	Private or Public? Public Goods and Services	Charlotte
12:00	Lunch	
1:00	Changing Market: Supply and Demand	Charlotte
2:00	Why Competition? Market Structure	Arlene
3:00	Taking the Meeting Home Evaluation	

Name_____

Appendix B

QUESTIONNAIRE

1. Below are some statements that have been made lately about economics as a field of study. Please indicate how strongly you agree or disagree with each one. Circle one number for each statement.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
a. I enjoy reading articles about economic topics.	1	2	3	4	5
b. I hate economics.	1	2	3	4	5
c. Economics is easy to understand.	1	2	3	4	5
d. I enjoy economics.	1	2	3	4	5
e. Studying economics is a waste of time.	1	2	3	4	5
f. Economics is one of my most dreaded subjects.	1	2	3	4	5
g. On occasion I read an unassigned book in economics.	1	2	3	4	5
h. I would be willing to attend a lecture by an economist.	1	2	3	4	5
i. Economics is a very difficult subject for me.	1	2	3	4	5
j. Economics is one of my favorite subjects.	1	2	3	4	5
k. I use economic concepts to analyze situations.	1	2	3	4	5
l. Economics is practical	1	2	3	4	5

PERSONAL DATA QUESTIONNAIRE

a. What year are you in school? (Circle one number.)

1 Freshman
2 Sophomore
3 Junior
4 Senior

b. Have you ever taken a economics/personal finance course in high school?

1 Yes
2 No

c. How often do you watch the news on TV?

1 Never
2 About once a week
3 About twice a week
4 About three times a week
5 Four or more times a week

d. How often do you read the newspaper?

1 Never
2 About once a week
3 About twice a week
4 About three times a week
5 Four or more times a week

e. What is the highest grade in school that your parents have completed?

(Circle one number in each column.)

Father	Mother	
1	1	No formal education
2	2	Some grade school
3	3	Completed elementary school
4	4	Some high school
5	5	Completed high school
6	6	Some college
7	7	Completed college
8	8	Completed master's degree, doctorate, medical or law school
9	9	I don't know

f. How would you classify your parent's occupation when employed?

Father	Mother	
1	1	Professional, business or managerial
2	2	Clerical, office or salesperson
3	3	Military
4	4	Manual (construction, factory work, etc.)
5	5	Other (please specify)_____
6	6	Don't know

g. Your sex

1 Male
2 Female

h. Age at last birthday _____

i. Of all the grades you received last semester/term what is your grade average? Circle one number.

1 A
2 A-/B+
3 B
4 B-/C+
5 C
6 C-/D+
7 D/D-
8 F

j. What is your grade point average (GPA)?

Appendix D

Name_____

QUESTIONNAIRE

Below are some statements that have been made lately about economics as a field of study. Please indicate how strongly you agree or disagree with each one. Circle one number for each statement.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
a. I enjoy reading articles about economic topics.	1	2	3	4	5
b. I hate economics.	1	2	3	4	5
c. Economics is easy to understand.	1	2	3	4	5
d. I enjoy economics.	1	2	3	4	5
e. Studying economics is a waste of time.	1	2	3	4	5
f. Economics is one of my most dreaded subjects.	1	2	3	4	5
g. On occasion I read an unassigned book in economics.	1	2	3	4	5
h. I would be willing to attend a lecture by an economist.	1	2	3	4	5
i. Economics is a very difficult subject for me.	1	2	3	4	5
j. Economics is one of my favorite subjects.	1	2	3	4	5
k. I use economic concepts to analyze situations.	1	2	3	4	5
l. Economics is practical	1	2	3	4	5

Appendix E

Weights used for occuaptional categories based on Duncan's Socio-Economic Index.

Duncan's SEI Score	Category
75	Professional, Business, or Managerial
47	Clerical, Office or Salesperson
31	Military
18	Manual
17	Homemaker

O. D. Duncan, in Albert J. Reiss, Jr., Occupations and Social Status (New York: Free Press, 1961) pp. 263-75.

Compiled Workshop Responses

Appendix F

GIVE AND TAKE WORKSHOP EVALUATION

Your comments on any phase of the seminar will be appreciated. You need not sign your name to the evaluation form.

1. How appropriate was the number of Give and Take programs viewed during the workshops? (circle one)

   too many — just right (||||| |) — too few (|)

2. How appropriate was the number of activities provided for each program? (circle one)

   too many — just right (||||| ||) — too few

3. How effective, taken as a whole, were the workshop program presenters? (circle one)

   very effective (|||||) — effective (||) — no opinion — weak — ineffective

4. How appropriate was the time taken to conduct this workshop? (circle one)

   too long — just right (||||| |) — too short (|)

5. Has the workshop proved helpful to you in using Give & Take in your classroom?

   very helpful (||||| ||) — somewhat helpful — not very helpful

6. Has the workshop increased your knowledge and understanding of economic/topics dealt with in Give & Take? (circle one)

   substantial increase (||) — some increase (||||) — no increase

7. What was your preworkshop feeling toward teaching economics? (circle one)

   very positive (|) — somewhat positive (||) — neutral (||) — somewhat negative (||) — very negative

8. Has this workshop changed your feelings regarding the teaching of economics? (circle one)

much more positive	somewhat positive	no change at all	somewhat negative	much more negative
(||)	(|||)	(|)		

9. Are in-service teacher training workshops necessary for the test use of the Give & Take series in the schools? (circle one)

completely necessary	probably necessary	don't know	probably advisable	very advisable
	(|||||)		(|)	

10. What is your overall rating of the workshop? (circle one)

    outstanding (||) — very good (|||||) — good — fair — poor

11. What aspect of the workshop do you think was most useful?

    ||| viewing tapes + activities
    || Activities
    | Discussion with peers

BEST COPY AVAILABLE

GIVE & TAKE

BEST COPY AVAILABLE

can help young people

- **increase their understanding of economic concepts.**
- **improve their decision-making skills.**
- **become more knowledgeable consumers, workers, and citizens.**

Twelve 15-minute programs for secondary students.

Give & Take programs dramatize problem-solving situations that show students how economic concepts—such as opportunity costs, supply and demand, and taxation—relate to their daily lives.

The series is intended for use in consumer education, economics, business education, home economics, social studies, and other classes where personal economics material is presented.

Each lesson is self-contained to permit teachers maximum flexibility in using the series.

Program Descriptions

1. ***You Choose: Scarcity and Personal Decision Making.*** Lily and June have trouble budgeting time and managing money. An easy-five-step decision-making model helps them.

2. ***We Choose: Scarcity and Social Decision Making.*** After a lunch time accident, the student council discovers that protecting consumers involves reconciling conflicting goals.

3. ***Let's Save: Opportunity Cost.*** A rock trio puts off pleasures to save for new outfits, but then Ricky faces them with another need for the money.

4. ***Credit-wise: Opportunity Cost.*** Tina, a young spendthrift, enjoys the advantages of credit, until hers begins to run out.

5. ***Where Do Jobs Come From? Derived Demand.*** Lindy gets the lead in the school musical, but when her mother loses her job in a can factory and her brother gives up his highway construction job to train in electronics, some tough decisions arise.

6. ***A Key to Productivity: Human Capital.*** Brett and Carl find that learning a new job skill leads to increased productivity and better opportunities. When the competition comes looking for skilled workers, each begins to reevaluate his career plans.

7. ***Private or Public? Public Goods and Services.*** Should the new park the sophomore class has created on a privately owned lot be sold to a private businessman for his fast food trolley, or should the city find funds to buy it for a public park?

8. ***Changing Taxes: Public Goods and Services.*** When a tax cut reduces city services, Dennis loses his job and can't buy a car to visit his girl—until the tax cut's effects on his dad's refuse business make an unusual set of wheels available to him.

9. ***Market Prices: Supply and Demand.*** This combination of documentary and dramatic vignettes explores the many effects a change in the supply of sugar has on consumers and the marketplace.

10. ***The Changing Market: Supply and Demand.*** Three teens in business together find first that there is a large demand for their new uni-sex perfume. Then an increase in supply has them searching for new ways to sell the product.

11. ***Take Your Choice: Substitution.*** When the only delivery truck in a rural community is wrecked, Brian finds a way to save his beloved horse and proves that sometimes it makes economic sense to substitute old ways for new.

12. ***Why Competition? Market Structure.*** There is a monopoly on refreshments at school basketball games. Ira decides that competition will bring down prices, but finds that low prices may mean low profits.